

Addendum 1



1800 O Street, Ste. 104, Lincoln, Nebraska 68508 (402) 477-6161

June 11, 2013

State of NE BSDC Building No. 4 Chiller Replacement

Alvine No. 2012 3192

Bid Date: June 19, 2013

This addendum is hereby made a part of the contract documents to the same extent as though it were originally included therein. Specifications and drawings shall be considered modified or revised as hereinafter described. Revisions to the drawings are referenced by the drawing number.

Changes to the Project Manual

General Specification Items:

1GS1. Pre-Bid Meeting Attendance Roster

1. See attached Pre-Bid Meeting Attendance Roster.

1GS2. Current Plan Holder List

1. See attached list of current plan holders from the A&D Technical Supply's online plan room.

Mechanical Specification Items:

1MS1. Section 23 09 93 – Sequence of Operations for HVAC Controls

1. Page 23 09 93-5, Article 3.04.H.2.c., replace with the following:
 - “c. Condenser water system treatment alarm – General alarm contact from condenser water treatment control panel, see Specification 23 25 00.”

1MS2. Section 23 21 13 – Hydronic Piping

1. Page 23 21 13-4
 - A. Article 2.03, replace the article title with the following:

“2.03 CONDENSER WATER PIPING, BURIED AND OUTDOORS ABOVE GRADE”
 - B. Article 2.04, replace the article title with the following:

“2.04 CONDENSER WATER PIPING, INDOORS ABOVE FLOOR”
 - C. Article 2.04, add the following:

- “E. Steel Pipe: ASTM A53/A53M, Schedule 40, black; using one of the following joint types:
 - 1. Welded Joints: ASTM A234/A234M, wrought steel welding type fittings; AWS D1.1 welded.
 - 2. Threaded Joints: ASME B16.3, malleable iron fittings.
 - 3. Grooved Joints: AWWA C606 grooved pipe, fittings of the same material, and mechanical couplings.”
- 2. Page 23 21 13-8, Article 2.11.B., replace with the following:

“Body: Ductile iron with resilient replaceable EPDM seat, wafer, lug, or grooved ends, extended neck.”
- 3. Page 23 21 13-9, Article 2.15.A., add the following:

“6. Patterson.”
- 4. Page 23 21 13-9, Article 2.16.A., add the following:

“9. Pro Hydronic Specialties.”

1MS3. Section 23 21 14 – Hydronic Specialties

- 1. Page 23 21 14-1
 - A. Article 1.01.A., delete this article.
 - B. Article 2.01, delete this article.
- 2. Page 23 21 14-2, Article 2.04.A., add the following:

“5. Patterson.”

1MS4. Section 23 25 00 – HVAC Water Treatment

- 1. Page 23 25 00-1, Article 1.05.B.1., replace with the following:

“1. Closed System: Maintain system essentially free of scale, total suspended solids, and fouling to sustain the following water characteristics (use the stricter of these water characteristics or chiller manufacturer’s required water characteristics):

a. Iron:	Less than 3.0 ppm
b. Copper:	0 ppm
c. pH:	7.0 to 8.0
d. Hardness as CaCO ₃ :	30 to 500 ppm
e. Alkalinity as CaCO ₃ :	30 to 500 ppm
f. Chlorides:	Less than 200 ppm
g. Sulfates:	Less than 200 ppm
h. Manganese:	Less than 0.1 ppm

- i. Nitrates: Less than 100 ppm
- j. Ammonia: Less than 2.0 ppm
- k. Total Dissolved Solids: Less than 1000 ppm"

2. Page 23 25 00-1, Article 1.05.B.2., replace with the following:

"2. Open System for Cooling Tower: Maintain system essentially free of scale, total suspended solids, and fouling to sustain the following water characteristics (use the stricter of these water characteristics or the cooling tower or the chiller manufacturer's required water characteristics):

- a. Iron: Less than 3.0 ppm
- b. Copper: 0 ppm
- c. pH: 7.0 to 8.0
- d. Hardness as CaCO_3 : 30 to 500 ppm
- e. Alkalinity as CaCO_3 : 30 to 500 ppm
- f. Chlorides: Less than 200 ppm
- g. Sulfates: Less than 200 ppm
- h. Manganese: Less than 0.1 ppm
- i. Nitrates: Less than 100 ppm
- j. Ammonia: Less than 2.0 ppm
- k. Total Dissolved Solids: Less than 1000 ppm

3. Provide passivation of the cooling tower's galvanized steel surfaces for eight weeks after initial cooling tower start up and per the cooling tower manufacturer's recommendations."

1MS5. Section 23 64 29 – Modular Water Chillers

1. Page 23 64 29-2, Article 2.01, add the following:

"E. Creotech Industries."

2. Page 23 64 29-3

- A. Article 2.02.A.12., add the following:

"12. Provide chiller with single point power. Chiller shall be equipped with a pre-engineered buss bar electrical system for single point power. The pre-engineered system shall also incorporate individual module isolation circuit breakers for full redundancy and ability of a module to be taken off-line for repair while the rest of the modules continue to operate. Individual power feeds to each module shall be unacceptable."

- B. Article 2.02.A.13., add the following:

"13. Chiller shall be designed to operate using R-410a Refrigerant."

C. Article 2.02.A.14., add the following:

“14. Each inlet water header shall incorporate a built in 30-mesh (maximum) in-line strainer system to prevent heat exchanger fouling and accommodate 100% flow filtration with a minimum surface area of 475 square inches per module.”

D. Article 2.03.B.8., revise to read as follows:

“8. Chiller shall be designed for parallel evaporator water flow. Provide variable flow butterfly or ball type isolation/control valves on evaporator with accessories and controls to allow the chiller to operate efficiently in a variable primary flow system. The valves shall modulate via a motorized actuator for return water temperature control, chiller minimum flow bypass, chiller no load bypass, or head pressure control.”

3. Page 23 64 29-4

A. Article 2.06.A.1.f., revise to read as follows:

“f. When chiller is enabled, the factory supplied Master Controller stages the chiller capacity from minimum to maximum as required by building load.”

B. Article 2.06.A.1.g., add the following:

“g. The chiller shall be furnished with a Master Controller as an integral portion of the chiller control circuitry to provide the following functions:

- 1) Provide automatic chiller shutdown during periods when the load level decreases below the normal operating requirements of the chiller. Upon an increase in load the chiller shall automatically restart.
- 2) The control panel shall provide alphanumeric display showing all system parameters in the English language with numeric data in English units.
- 3) Each module shall contain a slave controller that will allow any module to run in the event of a master controller failure or loss of communication with the master controller via an on/off/manual toggle switch.”

C. Article 2.06.A.4.b.8), add the following:

“8) Low condenser water flow.”

D. Article 2.06.A.4.b.9), add the following:

“9) Low suction temperature.”

E. Article 2.06.A.4.d., add the following:

“d. Failure of the chiller to start or chiller shutdown due to any of the above safety cutouts shall be annunciated by display of the appropriate diagnostic description at the unit control panel. This annunciation will be in plain English. Alphanumeric codes shall be unacceptable.”

4. Page 23 64 29-5, Article 3.02.D., add the following:

“D. Factory authorized service engineer shall be responsible for assembly of the chiller’s cabinetry package, for assembly of the electrical bus bar system to the chiller’s electrical junction box, and for wiring of the chiller condenser water debris removal system solenoid control valve.”

Changes to Drawings

Mechanical Drawing Items:

1MD1. Sheet M100 – Site Plan – Mechanical

1. Revise Flag Note No. 3 to read as follows:

“Contractor shall provide a galvanized steel chain link privacy fence with white privacy slats that is at least 5’-0” clear of the cooling tower casing on all sides unless greater clearance is required by the cooling tower manufacturer (contractor to verify actual cooling tower size and clearances with the provided cooling tower). The fence shall be at least as tall as the cooling tower when the cooling tower is mounted on the steel support structure (approx. 13’-0” tall fence but, contractor shall verify actual height with the provided cooling tower). Provide an 8’-0” wide x 7’-0” tall double swing gate access section as shown. Provide gate with galvanized steel security latch and drop rod hardware capable of accepting a pad lock. Set galvanized steel drop rod sleeves into new concrete pad below. Provide ASTM F 1043 Group 1C 4” OD corner, line, and gate posts at 4’-0” OC max and set each into a 16” diam. x 48” deep concrete footing with the post bottom 6” above the footing bottom. Fence manufacturer/contractor shall provide all design calculations, rails, support members, reinforcing, door hardware, and accessories as necessary for a complete fence installation.”

2. Remove the existing ACC concrete pads and remove additional existing concrete pad and street curb near the new cooling tower location as indicated on attached Mechanical Sketch Sheet MS-1.

3. Install new crushed rock in place of the ACC concrete pads, install additional new concrete pad and street curb near the new cooling tower location, and grade and seed the grass areas that are disturbed as part of this project as indicated on attached Mechanical Sketch Sheet MS-1.

1MD2. Sheet M101 – Basement Floor Plan – Mechanical

1. Relocate the condenser water return two way control valve (Valve V-2) located between the Chiller CH-1 and the condenser water Tank T-3 to be on the condenser water return piping located between the condenser water Tank T-3 and the Cooling Tower CT-1 per attached Mechanical Sketch Sheet MS-2.
2. Install a manual balance valve on the condenser water return piping located between control valve (Valve V-1) and the condenser water Tank T-3 per attached Mechanical Sketch Sheet MS-2.

1MD3. Sheet M200 – Mechanical Piping Diagrams

1. Install a manual balance valve on the condenser water return piping located between control valve (Valve V-1) and the condenser water Tank T-3 and size this same piping per attached Mechanical Sketch Sheet MS-3.

1MD4. Sheet M201 – Mechanical Details

1. Two-Way Water Coil Detail (Typ of 2) 6/M201: Add the following Note to this detail:
“Note:
1. A single pressure independent control valve may be provided instead of a pressure independent control valve and a balancing valve for each AHU if the pressure independent control valve incorporates the balancing valve function.”
2. Two-Way Water Coil Detail With Bypass Control Valve 7/M201: Add the following Note to this detail:
“Note:
1. A single pressure independent control valve may be provided instead of a pressure independent control valve and a balancing valve for this AHU if the pressure independent control valve incorporates the balancing valve function.”

1MD5. Sheet M300 – Mechanical Schedules

1. Cooling Tower Schedule: Add the following Remark to this schedule:
“(12) Provide cottonwood seed filters with mesh vinyl coated polyester which is UV, mold, mildew, and flame resistant and mount with quick release fasteners over the cooling tower inlet louvers.”
2. Tank Schedule: Add the following to the end of Remark No. 7:
“Contractor shall field verify all existing building clearances prior to fabricating the tank sections.”

Electrical Drawing Items:

1ED1. Sheet E010 – Basement Floor Plan Electrical Demolition

1. The two existing 4" conduits from the electrical room into the mechanical room serving the existing chiller shall remain and be saved for reuse.

1ED2. Sheet E101 – Basement New Floor Plan – Electrical

1. At the junction point of the two 4" existing conduits serving the original chiller, provide a junction box. The new chiller feeder shall be routed to this junction. The new chiller feeder conductors shall be routed in the two existing 4" conduits back to existing Switchboard 'MS'.

END

Attendance Roster

1800 O Street, Ste. 104, Lincoln, Nebraska 68508 (402) 477-6161



June 4, 2013

State of NE BSDC Building No. 4 Chiller Replacement

Alvine No. 2012 3192

Meeting Location:

BSDC Building No. 4 - E. 1st Fir Entrance

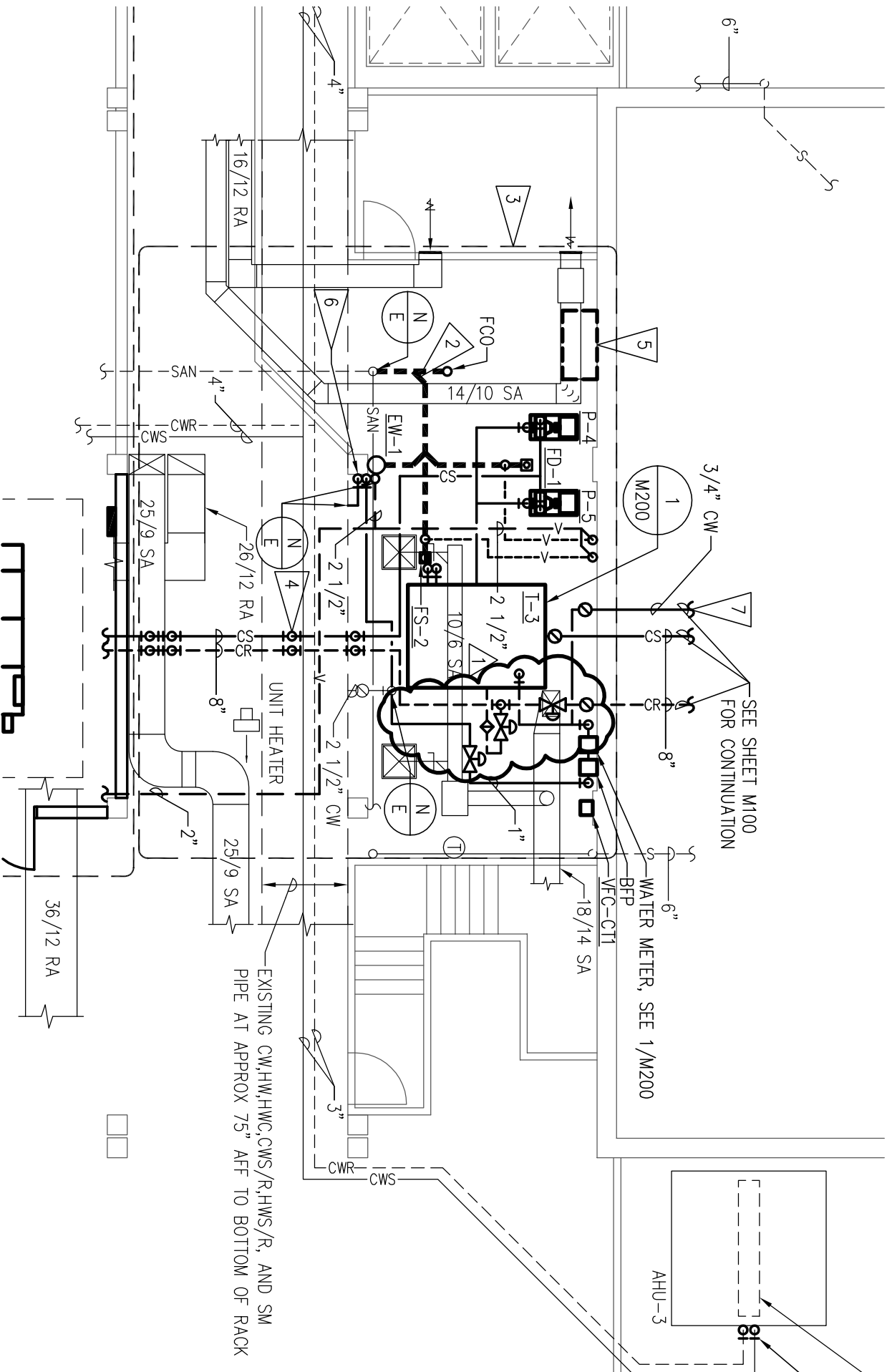
Purpose:

Pre-Bid Meeting

✓	Name	Organization/ Company	E-Mail	Phone No.	Fax No.	Cell Phone No.
	Jeff Cooper	Midlands Mechanical	jeffcooper@midlandsmechanical.com	402 444-2772	404 2778	402 669-8364
	Adam Nielsen	JCI	adam.h.nielsen@jci.com		331-1022	402-230-6905
	Kevin Wightman	Wightman Albs	Kevin.Wightman@albs.net	402-228-3100		
	Don P. Hinds	DICKER & BURHAM	Don.Hinds,DBI@cmac.com	421-6000		610-0348
	Gene Hitt	Scott Hitt & Son				
	John Schuler	Nifco	John.Schuler@nifco.com	477-0666		560-1787
	Kyle Anderson	JCI	Kyle.A.Anderson	402-651-4396		
	Scott Connors	AS/SBD				
	Rick Vogel	BSDC				
	Paul Baumann	Alvine Engineering	pbaumann@alvine.com	402-477-6161	402-477-9616	402-201-4836
	Bob Foust	Alvine Engineering	bfoust@alvine.com	"	"	

Plan Holder List for 'State of Nebraska Beatrice State Developmental Center Building No. 4'

Company Information	CSI Codes	Contact Information	Status Date Filled Date Returned	Delivery Method Tracking Number
Alvine Associates 1800 O Street Lincoln, NE 68508	Architect	Paul Bauman Phone: (402) 477-6161 Fax: (402) 477-9616	Filled 05/22/2013	Pickup - Customer Pick Up / Lincoln
Dickey & Burham Inc PO Box 22555 Lincoln, NE 68542-2555	GENERAL	Kevin Herr Phone: (402) 421-6000 Fax: (402) 421-6021	Filled 05/29/2013	Pickup - Customer Pick Up / Lincoln
Johnson Controls/Lincoln 2133 Cornhusker Hwy STE 200 Lincoln, NE 68521	MECHANICAL	Jeff Crouse Phone: (402) 435-4924 Fax: (402) 435-4994	Filled 06/03/2013	Pickup - Customer Pick Up / Lincoln
Lincoln Builders Bureau 5910 S. 58 St Suite C Lincoln, NE 68516	PLAN ROOM	Rhonda Gutknecht Phone: (402) 421-8332 Fax: (402) 421-8334	Filled 05/22/2013	Delivery - A & D Delivery Lincoln
Mcgraw Hill Dodge/Arkansas - Hard Copy Plans 3315 Central Ave. Hot Springs, AR 71913	PLAN ROOM	plan room Phone: (817) 375-2959 Fax: (501) 625-3544	Filled 05/22/2013	Ship - UPS Ground
Nifco Mechanical Systems 500 Blue Heron Dr Lincoln, NE 68522	MECHANICAL	Mark Long Phone: (402) 477-0666 Fax: (402) 477-2314	Filled 06/03/2013	Pickup - Customer Pick Up / Lincoln
Omaha Builders Exchange 4255 S. 94th St Omaha, NE 68127	PLAN ROOM	Lisa Shockey Phone: (402) 593-6908 Fax: (402) 593-6912	Filled 05/22/2013	Delivery - A & D Delivery Omaha
Shanahan Mech & Elec 202 W 2nd P O Box 188 Valparaiso, NE 68065	Mechanical/Electrical	Jill Sydik Phone: (402) 784-2381 Fax: (402) 784-2288	Filled 06/05/2013	Pickup - Customer Pick Up / Lincoln
The Waldinger Corporation 2601 Ball Ave. Des Moines, IA 50321	MECHANICAL	Matt Trewet Phone: (515) 284-1911 Fax: (515) 323-5150	Filled 06/04/2013	Pickup - Customer Pick Up / Lincoln
Vision Mechanical 4700 Douglas Cir. Lincoln, NE 68504	HVAC / Mechanical	Chad Francisco Phone: (402) 466-0087 Fax: (402) 466-7593	Filled 05/23/2013	Pickup - Customer Pick Up / Lincoln
Walt Broer Construction 2455 W Van Dorn Lincoln, NE 68522	Construction	Walt Broer Phone: (402) 435-5557 Fax: (402) 435-2625	Filled 06/04/2013	Pickup - Customer Pick Up / Lincoln



STATE OF NEBRASKA BEATRICE STATE DEVELOPMENTAL CENTER
BUILDING NO. 4 CHILLER REPLACEMENT

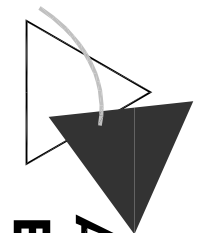
PROJECT NO.
20123192

DATE
06/11/2013

DRAWING REFERENCED:
ADDENDUM NO.: 1

M101

SKETCH
MS-2



**Alvine
Engineering**

